The Promoter Region (-800,-509) Polymorphisms of Transforming Growth Factor–β1 (TGF-β1) Gene and Recurrent Spontaneous Abortion.

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Recurrent spontaneous abortion (RSA) is regarded as a common pregnanacy complication in southern Iran. The exact uses of RSA are not yet known.

Transforming growth factor growth factor-betal (TGF-betal) is produced by T regulatory lymphocytes (Treg), which play n important role in the physiology of pregnancy, Several polymorphisms of the TGF-betal gene have been reported, some ith important correlation with disease severity. In this investigation, the polymorphism of the TGF-betal gene at promoter gion positions-800 (G/A) and-509 (C/T) was studied in 111 RSA and 110 normal female subjects from southern Iran by CR-RFLP, Results indicated that at position-800 (G/A) polymorphism. 75.7% of RSA cases and 77.3% of normals were omozygote GG. In addition, 23.4% of cases and 22.7% of normal individuals were heterozygote AG. Only one of the atients appeared to be homozygote AA. None of the normal individuals were found to be homozygote AA at this position. the case of the-509 (C/T) polymorphism, 38.7% of patients and 28.2% of controls were homozygote CC. While 40.6% cases and 50.9% of normal individuals were heterozygote CT, 20.7% of RSA cases and 20.9% of controls were homozygote T. The results indicate that there are no statistically significant difference of genotype distribution and allele frequency etween RSA cases and controls at both polymorphic sites. In conclusion, the promoter region polymorphisms of TGF-betal positions-800 (G/A) and-509 (C/T) may not be associated with RSA.

Nicotinic Infertility: Assessing DNA and Plasma Membrane Integrity of Human Spermatozoa.

Infertility remains a major problem in society. With recent data as many as one in four couples is trying to solve problem. he objective of this study was to evaluate the possible effects of nicotine (0.25,0.50& 0.75 mM), as an active component cigarette in cigarette smoke, in vitro, on sperm membrane (by Spermatocrit and LPO tests), DNA integrity (by Comet say), and viability of spermatozoa (by vital eosin staining) from normozoospermic men. Sperm samples were washed and luted with PBS. We showed a drop in spermatocrit values and an elevation in TBARS/MDA level, under nicotine additions, ominantly in 0.75 mM nicotine concentration indicating a deleterious effect of nicotine on sperm membrane intactness. There was also a strong negative correlation between LPO rate and % viable sperm cell (r=-0.990, p<0.001). Data tained from Comet assay (SCGE) technique revealed that nicotine could induce double–stranded DNA breaks (11% in 75 mM concentration) in the sperm nuclei compared to controls. The value of (r) between LPO rate and % Comets was und to be + 0.976 (P<0.001). Taken together, nicotine proved to be a potential oxidant agent in the category of environmental sks to the integrity of sperm plasma membrane and DNA.